

What Is Claimed Is:

1. A porcine uroplakin II gene promoter having a base sequence of SEQ ID

NO: 1:

5 [SEQ ID NO: 1]

gggctaggagtgaatcagagctggcctatgccacagcaacgcagaatccaaaccacatctccgacctaca  
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 ctcaacttgccctcaggaaaccacagcttgccagcaccagcccagcaccagcccagct

15           2. The uroplakin II promoter of Claim 1, which is one selected from  
 functional equivalents which have one or more disruption, deletion, insertion, point,  
 substitution, nonsense, misense, polymorphism or rearrangement mutation occurred  
 in the base sequence of SEQ ID NO: 1.

20           3. An expression vector comprising the base sequence of the promoter of  
 Claim 1 or 2 and a base sequence coding for a target protein at the 3' end of the  
 promoter.

25           4. The expression vector of Claim 3, wherein the target protein is human  
 erythropoietin (EPO).

5. The expression vector of Claim 4, which is the expression vector pUP2/hEPO deposited under the accession number KCTC 10352BP.

6. The expression vector of Claim 4, which is an I/pUP2/hEPO vector containing a neomycin-resistant gene of SEQ ID NO: 5 as a selective marker, and an insulator of SEQ ID NO: 6 at the 5' end of the UPII promoter:

[SEQ ID NO: 5]

gcggcgcgcgcgtcaggtggcacttttcggggaaatgtgcgcggaaccctattgttattttctaataca  
ttcaaatatgtatccgctcatgagacaataaccctgataaatgctcaataattgaaaaaggaagagtcctgaggcggaa  
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 5 ggcaggccctgccatagcctcaggttactcatatatactttagattgatttaaaacttcattttaattaaaaggatctaggtga  
 agatccttttgataatctcatgacccaaaatccctaacgtgagtttcgtccactgagcgtccgatcg

[SEQ ID NO: 6]

tcgactctagaggacagcccccccaagccccagggatgtaattacgtccctccccgctaggggca  
 gcagcgagccgccggggctccgctccggtccggcgtcccccgcatcccgagccggcagcgtgcggggacag  
 10 cccgggcacggggaaggtggcacgggatcgcttctctgaacgcttctcgtgctctttgagcctgcagacacctgggg  
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 10 gctgtgccactgcagcaccgctcttggagaaggtaaattcttgctaaatccagcccaccctcccctggcacaacgtaag  
 gccattatctctcatccaactccaggaacggagtcagttag

7. The expression vector of Claim 4, which is a pUP2/hEPO (WPRES) vector  
 containing a neomycin-resistant gene of SEQ ID NO: 5 as a selective marker, and a  
 15 woodchuck hepatitis virus posttranscriptional regulatory element (WPRES) of SEQ ID  
 NO: 7 at the 3' end of the EPO gene:

[SEQ ID NO: 7]

accaggtctgttcctgttaataaacctctggattacaaaattgtgaaagattgactggtattcttaactatgttgct  
 cttttacgctatgtggatacgtgtttaatgcctttgtatcatgctattgcttcccgatggcttcattttctcctcctgtataa  
 20 atcctggttgctgtctctttatgaggagttgtggccgtgtcaggcaacgtggcgtggtgtgactgtgttgctgacgcaa  
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 25 agtcgatctcccttgggcccctccccgcctgttctgcctcgggctcctcag



8. The expression vector of Claim 4, which is an I/pUP2/hEPO (WPRE) vector that contains a neomycin-resistant gene of SEQ ID NO: 5 as a selective marker, an insulator of SEQ ID NO: 6 at the 5' end of the UP2 promoter, and an  
5 WPRE of SEQ ID NO: 7 at the 3'-end of the EPO gene.

9. An animal's fertilized ovum introduced with the expression vector of any one of Claims 4 to 8.

10 10. A transgenic animal obtained by the implantation of the fertilized ovum of Claim 9.

11. The transgenic animal of Claim 10, which is one selected from the group consisting of porcine, mouse, bovine, poultry, ovine and caprine animals.  
15

12. A method for producing useful proteins, which comprises the steps of:  
implanting the animal's fertilized ovum introduced with the expression vector of any one of Claims 4 to 8 into a surrogate mother animal; and  
obtaining transgenic animals from the surrogate mother animal; and  
20 isolating and purifying useful proteins from the urine of the transgenic animals.